8K Super Hi-Vision

20 133-megapixel Image Sensor

Towards a compact, full-resolution 8K Super Hi-Vision camera

Outline

We are conducting research with the aim of making full-resolution 8K Super Hi-Vision (8K SHV)※1 cameras more compact. We have developed a 133-megapixel image sensor that enables a single chip to capture full-resolution 8K Super Hi-Vision video.

Features

Sensor for compact full-resolution 8K SHV camera

Until now, it was difficult to reduce the size of the full-resolution SHV camera because it needed three image sensors (i.e.,one for each RGB-color channel) and a color separation prism. The new image sensor can capture full-resolution video with a frame frequency of 60 Hz by itself and be incorporated in a compact camera without a prism.

35mm full-frame, large optical format※2

To accommodate more pixels within a given area of the image sensor, each pixel must be made smaller, and its sensitivity decreases as a result. We have suppressed this decrease in sensitivity by using optical format larger than that of conventional sensors. We have also designed the sensor to have an active area with a diagonal length that is equivalent to that of a 35mm full-frame image sensor, thereby making it possible to use a wide variety of commercially available lenses.

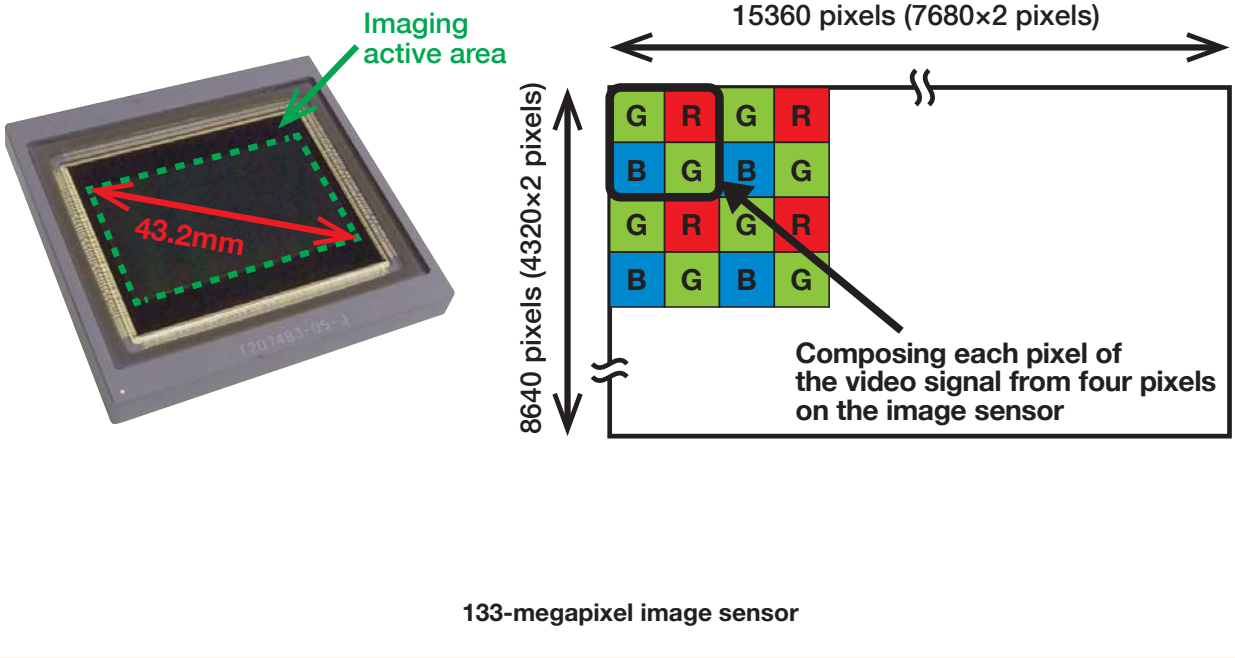
The world's largest pixel count for video shooting

This image sensor has the largest pixel count of any image sensor currently designed for shooting video.

Future plans

We will incorporate this image sensor into compact full-resolution 8K Super Hi-Vision camera for practical use.

※1 Full-resolution 8K Super Hi-Vision: A Super Hi-Vision video signal format having 33 megapixels (7680 horizontal × 4320 vertical pixels) for each R/G/B color signal.
※2 35mm full-frame optical format: Optical size of image sensor that is equivalent to 35mm film (24 mm x 36mm) (diagonal: 43.27mm).



133-megapixel image sensor